

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-11 (Canceled).

Claim 12 (Currently Amended): A method for diagnosing functional faults of a functional architecture ~~comprising~~ including functions for performing a service and associated with sensors and actuators that produce and consume data, ~~the method~~ said method comprising:

- i) creating a first list of particular values corresponding to functional faults of the sensors and actuators;
- ii) creating a second list of particular values that permit propagation of information relating to said functional faults of said sensors and actuators across the functional architecture;
- iii) formulating a functional diagnosis of the service based on the first and second lists of particular values; and
- iv) recording the particular values and their propagation on a memory device.

Claim 13 (Previously Presented): A diagnostic method according to claim 12, wherein, after formulating of said functional diagnostic (iii), said method comprises a step of deducing an operational diagnosis of an electronic architecture onto which said functions are mapped, said electronic architecture comprising calculators, networks, signal lines, and connectors.

Claim 14 (Previously Presented): A diagnostic method according to claim 13, wherein creating the lists of said particular values is performed after mapping of the functions onto the electronic architecture.

Claim 15 (Previously Presented): A diagnostic method according to claim 14, wherein the particular values correspond to at least one of the following:

- cut bus;
- corrupted frame;
- short circuit applied to a wire;
- wrong contact applied to a connector of a strand, sensor, actuator or calculator; and
- execution fault applied to a microcontroller.

Claim 16 (Previously Presented): A method according to claim 13, wherein, given said operational diagnosis for the service, the particular values comprise functional particular values associated with sensors, actuators, and the method further comprising a step of listing functions executing the service for at least one data flow between two functions, or between a sensor and a function, or between a function and an actuator, for which no functional particular value is defined for the flow, and wherein if an operational particular value is defined, then a new functional particular value is automatically determined for said at least one data flow.

Claim 17 (Previously Presented): A method according to claim 12, further comprising listing undiagnosed feared incidents to construct an analysis of functional safety of the functional architecture.

Claim 18 (Previously Presented): A method according to claim 12, wherein said functions are mapped onto a hardware architecture composed of calculators, networks, signal lines, and connectors,

and wherein the particular values and feared incidents are listed to deduce an analysis of functional safety of the functional architecture.

Claim 19 (Previously Presented): A diagnostic method according to claim 12, wherein the functional architecture comprises an architecture with which a vehicle can be equipped.

Claim 20 (Previously Presented): A diagnostic method according to claim 12, further comprising analyzing feasibility and/or susceptibility to failure of functioning of the architecture and analyzing establishment of an output indicating the feasibility and/or susceptibility to failure.

Claim 21 (Previously Presented): A commercial article provided with a computer-readable memory, a program executable by a computer being recorded in the memory for diagnosis of functional faults of a functional architecture, the program including encoding for:

- i) determining and listing particular values corresponding to functional faults of sensors and actuators;
- ii) determining and listing particular values permitting propagation of information relating to said faults across the functional architecture;
- iii) forming a functional diagnosis of the functional architecture based on said particular values; and

iv) recording the particular values and their propagation on a memory.

Claim 22 (Previously Presented): A data-processing tool programmed to perform the method for diagnosing functional faults of a functional architecture according to claim 12.

Claim 23 (Previously Presented): A data-processing tool comprising the commercial article according to claim 21.

Claim 24 (Previously Presented): A diagnostic method according to claim 12, wherein said particular values that permit propagation of said information relating to said functional faults of said sensors and actuators include a value associated with the presence of a connection fault between said sensors and actuators.

Claim 25 (Previously Presented): A diagnostic method according to claim 24, wherein said connection fault is a short-circuit formed by a wire between said sensors and actuators.

Claim 26 (Previously Presented): A diagnostic method according to claim 24, wherein said connection fault is a cut electrical wire between said sensors and actuators.

Claim 27 (Previously Presented): A diagnostic method according to claim 24, wherein said connection fault is a faulty connector wire between said sensors and actuators.

Claim 28 (Previously Presented): A diagnostic method according to claim 12, wherein said particular values that permit propagation of said information relating to said

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functional faults of said sensors and actuators include a value associated with the absence of a connection fault between said sensors and actuators.